

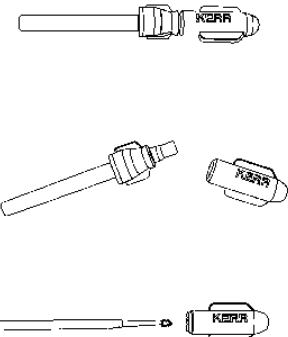
[Return to Materials Evaluations](#)

**52-17 OptiBond Solo (Project 97-02) (08/97)**

OptiBond Solo is a light-activated, "single-bottle" dentin bonding agent recommended by the manufacturer for bonding composite or amalgam to tooth structure, bonding composite to composite (composite repairs), and bonding composite to metal and porcelain (porcelain repair). OptiBond Solo is unique in being available in disposable, plastic, unit-dose capsules ("Unidose Packets"). Kerr claims this enhances chairside infection control and reduces waste of the bonding agent. Although the product is also available in bottles, only the Unidose form was evaluated in this project. The kit contains 100 Unidose Packets which consist of a small plastic capsule in a foil pouch, one syringe of 37.5 percent phosphoric acid etchant, disposable etchant syringe tips, and disposable Kerr Applicator Tips. According to Kerr, OptiBond Solo is alcohol-based, contains fluoride, and is filled to 25 percent (apparently by weight) with fumed silica and barium glass fillers.



To use the product for routine direct composite bonding, the etchant is applied for 15 seconds to enamel and dentin. It is then removed by thorough rinsing and the tooth structure is lightly dried but not desiccated. A foil pouch containing a Unidose capsule is then opened and the capsule removed. The capsule is opened by twisting its two halves apart. A Kerr Applicator Tip (a plastic, disposable stick with a small amount of fiber on one end) is used to apply the bonding agent to enamel and dentin for 15 seconds. Kerr stresses that the agent must be applied using a continuous brushing motion. If the area to be bonded is primarily dentin, a second application should be made. The adhesive is then light activated for 20 seconds and the restorative material is placed according to its manufacturer's instructions.



**Manufacturer:**

Kerr Corporation  
1717 W. Collins Avenue  
Orange, CA 92867-9880  
(800) 537-7123  
(714) 516-7400  
(714) 516-7633 FAX

**Suggested Retail Price:**

\$163.33 OptiBond Solo (product number 27931)  
100 ( 0.1 mL) Unidose Packets  
one 3-g syringe of 37.5% Kerr Gel etchant  
10 disposable gel etchant syringe tips  
50 disposable Kerr Applicator Tips  
instructions  
laminated instruction card

**Government Price:**

\$85.50 OptiBond Solo (product contents and number as listed above)

**ADVANTAGES:**

- + Bonds as strongly to moist dentin as to dry (but not desiccated) dentin.
- + Judged by evaluators to be straightforward to apply and easy to use.
- + Etchant is used to simultaneously condition enamel and dentin; this simplifies the etching process.
- + Requires less time to apply than the three-component bonding products evaluated by DIS.
- + Unit-dose, disposable capsules enhance infection control and reduce waste of the bonding agent.
- + Is provided with a laminated instruction card that uses graphics to depict dispensing and application

- + Expiration date and lot number are stamped on each Unidose Packet.
- + Recommended storage conditions are listed on outside of box.
- + No mixing of components is required.
- + Packaged with disposable applicator tips that make adhesive placement easy.

**DISADVANTAGES:**

- Is not an all-inclusive bonding product; does not contain hydrofluoric acid, opaquer, and silane solution called for in product instructions.
- Some evaluators disliked product's slightly increased viscosity.
- Is not provided with a Material Safety Data Sheet (MSDS).

**SUMMARY AND CONCLUSIONS:**

OptiBond Solo's innovative, unit-dose packaging enhanced chairside infection control and reduced the amount of waste. Users embraced the concept of unit dosing of dentin bonding agents and rated this aspect of the product highly. Clinicians have the option of using Solo on moist dentin or on dry dentin. It is important to note that "moist" does not imply saliva or blood contaminated and dry does not mean desiccated. It was not the fastest "one-component" bonding product to apply, but it was faster than several other similar products. While not producing the strongest bond to dentin recorded by "one-component" bonding products in the DIS laboratory, Solo performed well in bond strength testing. The most important disadvantage of Solo is that it is not supplied with all the components required to accomplish the types of bonding for which it is recommended. **OptiBond Solo** is rated **Acceptable** for use by the federal dental services.